

California Energy Commission

STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

Addendum 6 for One Project Awarded Funding Through the
Alternative and Renewable Fuel and Vehicle Technology Program
Under Solicitation PON-13-606 – Electric Vehicle Charging
Infrastructure



CALIFORNIA
ENERGY COMMISSION
Edmund G. Brown Jr., Governor

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ADDENDUM 6

The *Localized Health Impacts (LHI) Report for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-13-606* was posted April 11, 2014 (CEC-600-2014-002).¹ This addendum uses the same approach to assess the localized health impacts for one project with two proposed locations, each with one electric vehicle (EV) direct current fast charger (DCFC). The locations are described in Table 1.

Table 1: New Proposed Site Locations for DCFCs

Grantee	New Proposed Site Locations	Surroundings for the New Sites (within 1-mile radius)
U.S. Green Vehicle Council	2654 West March Lane, Stockton, California 95207 (1 DCFC)	9 schools, 4 day-care centers, and 13 health care centers or hospitals
U.S. Green Vehicle Council	31540 Ridge Route Road, Castaic, California 91384 (1 DCFC)	5 schools, 2 day-care centers, and 2 health care centers or hospitals

Source: Energy Commission staff analysis

Air Quality

Stockton and Castaic are in nonattainment zones for ozone, particulate matter (PM²) 2.5 and PM 10. If a project site is in a nonattainment zone and has more than one environmental justice (EJ) indicator, as shown in Table 2, it is considered a high-risk community, according to the Environmental Justice Screening Method³. Stockton is considered a high-risk community, and Castaic is not.

EJ Indicators

Table 2 shows the EJ indicators for the sites with comparisons to California. The yellow highlight shows a poverty level greater than California where a minority group exceeds 30 percent. Stockton has four EJ indicators in addition to being located in a nonattainment zone. Castaic has one EJ indicator (unemployment) based off Los Angeles County.

1 Brecht, Patrick, Jennifer Allen, Lindsee Tanimoto. 2014. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2014-002.

2 "Particulate matter" is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled.

3 California Air Resources Board (ARB), *Air Pollution and Environmental Justice, Integrating Indicators of Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making*, 2010. (Sacramento, California) Contract authors: Manuel Pastor Jr., Ph.D., Rachel Morello-Frosch, Ph.D., and James Sadd, Ph.D.

Table 2: EJ Indicators Compared With California
Yellow highlighted percentages indicate EJ indicators

	Below Poverty Level (2009 – 2013)	Black Persons (2010)	American Indian and/or Alaska Native (2010)	Asian and/or Pacific Islander (2010)	Persons of Hispanic or Latino Origin (2010)	Persons Under 5 Years of Age (2010)	Persons Over 65 Years of Age (2010)	Unemployment (May 2015)
California	15.9%	6.2%	1.0%	13.0%	37.6%	6.8%	11.4%	6.4%
EJ Indicators	>15.9%	>30%	>30%	>30%	>30%	>8.16%	>13.8%	>6.4%
Stockton	24.3%	12.2%	1.1%	21.5%	40.3%	8.4%	10.0%	9.3%
Castaic *Los Angeles County	8.6%	3.3%	0.6%	11.4%	24.8%	6.8%	5.7%	7.3%*

Sources: Unemployment information from the State of California, Employee Development Department Labor Market Information Div.: http://www.labormarketinfo.edd.ca.gov/CES/Labor_Force_Unemployment_Data_for_Cities_and_Census_Areas.html .
Demographics from: U.S. Department of Commerce, U.S. Census Bureau, <http://quickfacts.census.gov/qfd/states/06/0616378.html> and http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

Equivalent Gasoline Gallons Displaced

The estimated equivalent gallons of gasoline displaced, based on 23.9 miles per gallon of gasoline due to electric vehicle miles traveled (VMT), are shown in Table 3. Each DCFC charges one vehicle at a time.

Table 3: Estimated Equivalent Gasoline Gallons Displaced

Project Location	Chargers	Estimated Electric VMT per Year (2016 vehicles)	Estimated Total Equivalent Gasoline Gallons Displaced per Year
Stockton	1 DCFC	32,570	1,362
Castaic	1 DCFC	32,570	1,362

Source: Energy Commission staff analysis

Location Analysis and Community Impacts

Based on staff's assessment of the proposed new site locations, it is expected that the surrounding communities will not be disproportionately impacted by the implementation of the proposed projects. While overall air quality depends on several factors, the Energy Commission expects that air quality will improve over time where the chargers are proposed as they support a growing number of EVs. As more plug-in EVs

enter the market and displace gasoline, tailpipe pollutants will decrease. The anticipated impact to Stockton and Castaic is likely positive in terms of cleaner air.